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#### **PATENT**

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:

Richard J. HICKEY, Jr.

Assignee:

Radio Computing Services, Inc.

Serial No.:

10/643,729

Filed:

19 August 2003

Title:

Method, Apparatus and Article for Data Reduction

Attorney Docket:

505/1

### **INFORMATION DISCLOSURE STATEMENT**

SIR:

Pursuant to provisions of 37 C.F.R. 1.97 and 1.98, Applicant hereby identifies the following Patents of which it has knowledge. Applicant makes no representation as to whether or not it has conducted a search and is identifying and disclosing these patents in order to comply with its duty to disclose, pursuant to 37 C.F.R. 1.56. Copies of these patents are enclosed, along with PTO form 1449.

Further, the filing of this Information Disclosure Statement does not constitute an admission that the patents are prior art, or are material to patentability of the subject matter of this invention.

#### **PATENT**

<u>Inventor</u>	Pat. No.	<u>Date</u>	<u>Title</u>
Ellis	5,621,454	15 April 1997	Method and System for Recognition of
			Broadcast Segments
Boles	5,019,899	28 May 1991	Electronic Data Encoding and Recognition
			System
Lamb	4,437,050	25 July 1995	Method and Apparatus for Recognizing
			Broadcast Information using Multi-
			Frequency Magnitude Detection

A corresponding PCT application No. PCT/US04/25628 has been filed on 9 August 2004. As part of that application, the International Searching Authority has conducted a search. The above referenced Patents have been identified through that search. Further, a copy of the International Search Report and corresponding opinion of the International Searching Authority are enclosed.

Boles and Lamb define the general state of the art and are not believed to be of particular relevance.

Ellis discloses the use of an embedded bitted keyword in a video signal, the probability of matching the keyword to a predefined keyword in a specified location on the frame of video and defines the general state of the art.

The present application discloses the reduction of a signal to a series of defined peaks, and the probability of a broadcast segment matching a known segment. The Ellis patent discloses a basic set of probability formulas and a method of calculating the success of matching the two keywords which are restricted to a specified length and may be offset in location on a frame. Claim 70 of the present application discusses the use of probability to determine if a set of peaks from a new media segment which may vary in quantity and location in time, matches a set of peaks from a known media segment. While, the principles of probability and statistics underlie both Ellis and the present application, the methods of achieving the results are strikingly

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different. The Ellis patent requires a specific size for the keyword, whereas, the present application accepts a varying dataset and is able to adapt to that changing condition. Further, the Ellis patent requires the keyword to be previously generated and stored allowing the comparison of only those video segments for which the user has a keyword, limiting the ability for competing media companies to track the variety of programs being broadcast. The present application permits through the use of the probability and statistical methods of claim 70 is able to generate a signature for almost any media compilation.

Since, none of the prior art references discloses a method of reducing the signal of media segment to a signature based on number of peaks which may vary in time and size, and the probability of a new media segment which may not be identical in time and size actually matching the original segment. Therefore, the instant invention is patentably distinct from, and unobvious in view of, the above patents, whether considered singly or in combination.

Dated: February 28, 2005

Respectfully submitted LILLING & LILLING P.C.

Bruce E. Lilling (Reg. No. 27,656)

P.O. Box 560

Goldens Bridge, NY 10526

Tel. (914) 684-0600 Fax. (914) 684-0304

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Substitution form 1449/PTO

Sheet 1

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known			
Application Number	10/643,729		
Filing Date	19 August 2003		
First Named Inventor	Richard J. HICKEY,Jr	-	
Art Unit			
Examiner Name			
Attorney Docket Number	505/1		

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.¹	Document Number  Number-Kind Code <sup>2 (f known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		<sup>US-</sup> 5,621,454	04-15-1997	ELLIS	
		<sup>US-</sup> 5,019,899	05-28-1991	BOLES	
		<sup>US-</sup> 4,437,050	07-25-1995	LAMB	
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Examiner Initials*	Cite No.1	Foreign Patent Document	Date Applicant of Cited Document Where Relevant Passage	Name of Patentee or	Pages, Columns, Lines,	Τ
initidis	INO.	Country Code <sup>3</sup> "Number <sup>4</sup> "Kind Code <sup>5</sup> (if known)		Or Relevant Figures Appear	T <sub>e</sub>	
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Examiner	Date	-
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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